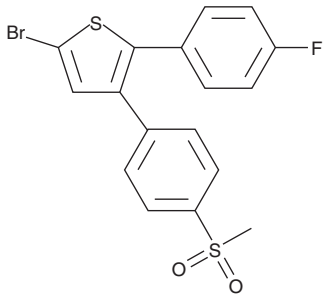
PRODUCT INFORMATION

DuP-697

Item No. 70645

CAS Registry No.:	88149-94-4
Formal Name:	5-bromo-2-(4-fluorophenyl)-3-(4-(methylsulfonyl)phenyl)-thiophene
MF:	$C_{17}H_{12}BrFO_2S_2$
FW:	411.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 254, 300 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

DuP-697 is supplied as a crystalline solid. A stock solution may be made by dissolving the DuP-697 in the solvent of choice, which should be purged with an inert gas. DuP-697 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of DuP-697 in these solvents is approximately 7, 15, and 54 mg/ml, respectively.

DuP-697 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, DuP-697 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. DuP-697 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

DuP-697 is a member of the diaryl heterocycle group of selective COX-2 inhibitors which includes MK-966 (rofecoxib), SC-58125, and celecoxib. DuP-697 is a potent and time-dependent inhibitor of COX-2.[1] When tested on isolated recombinant enzymes, DuP-697 is at least 50 times more potent in the inhibition of COX-2 than COX-1.[2] The IC_{50} values for human recombinant COX-2 are 80 and 40 nM at 5 and 10 minutes, respectively.[3] The IC_{50} for the inhibition of human recombinant COX-1 after the same time intervals is 9 µM.[3] DuP-697 also attenuates the COX-1 inhibitory activity of non-selective COX inhibitors such as indomethacin.[4]

References

1. Kargman, S., Wong, E., Greig, G.M., *et al.* Mechanism of selective inhibition of human prostaglandin G/H synthase-1 and -2 in intact cells. *Biochem. Pharmacol.* **52**, 1113-1125 (1996).
2. Seibert, K., Masferrer, J., Needleman, P., *et al.* Pharmacological manipulation of cyclooxygenase-2 in the inflamed hydronephrotic kidney. *Br. J. Pharmacol.* **117**, 1016-1020 (1996).
3. Johnson, J.L. [Unpublished] (2000).
4. Rosenstock, M., Danon, A., and Rimon, G. PGHS-2 inhibitors, NS-398 and DuP-697, attenuate the inhibition of PGHS-1 by aspirin and indomethacin without altering its activity. *Biochim. Biophys. Acta* **1440**, 127-137 (1999).

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